

REMARKS

Applicant submits that the present amendment is fully responsive to the Office Action dated April 20, 2010, and, thus, the application is in condition for allowance.

By this reply, claims 29, 36, and 43 are amended. Claims 29-43 remain pending. Of these, claims 29, 36, and 43 are independent. An expedited review and allowance of the application is respectfully requested.

In the outstanding Office Action, claims 29-43 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Petite et al. (US 6,437,692) in view of Mecham et al. (US 6,314,340), in further view of Hergert (US 6,108,590). It is asserted that that Petite discloses substantially the residential gateway, control server, and article of manufacture of the present invention as claimed, but for stating that information is accessed from a climatic information providing server, economic setpoint information being a cost below which the cost of operation of the residential device must stay; and wherein the control server determines the control parameters based upon an optimal level for the control parameters that remains within the economic setpoint, wherein said optimal level may not correspond to an optimal performance if the optimal performance requires a higher economic setpoint. It is further asserted that Mecham and Hergert disclose these deficiencies and the combination of these references would have been obvious to one of ordinary skill in the art. Applicant respectfully traverses.

With respect to independent claims 29, 36, and 43, neither Petite nor Mecham nor Hergert, nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as claimed. For example, Petite fails to disclose wherein the control server determines the control parameters based upon an optimal level for the control parameters that remains within the economic setpoint, wherein said optimal level may not correspond to an

optimal performance if the optimal performance requires a higher economic setpoint, wherein the economic setpoint is configured by a user of the at least one residential device. These features are recited in each of the independent claims and are disclosed, for instance, in paragraph [0022] of the specification as published. Setting an economic setpoint allows a user to keep utility costs below a set level while still producing an acceptable result, for instance, by having healthy grass. The system optimizes the level of watering based upon the conditions determined over the internet as well as the economic setpoint. This optimization may cause the sprinkler to water at a certain time of day, water a certain amount each day, water a certain amount at certain periods, etc. based upon what is optimal. However, there is a maximum amount set by the user, the economic setpoint, below which the watering and electricity must stay. The optimization is an amount that produces the best result while remaining within the economic setpoint. This may not be, for instance, the ideal amount for perfectly health grass, but keeps the grass as healthy as possible without going over the allotted budget. Perfectly healthy grass may require a higher setpoint for unlimited watering throughout the day or at a period of the day, but the invention limits the optimization to the created setpoint. Petite discloses a customer workstation that periodically downloads and reviews rain gauge data that can initiate an automatic control signal appropriate with the customer's watering requirements (Petite, Column 13, Lines 23-28). Petite does not disclose any optimization based on an economic setpoint, nor does Examiner assert that Petite does. Petite simply discloses watering according to a schedule. Thus, this feature is not present in Petite.

Mecham fails to cure the deficiencies of Petite because Mecham also fails to disclose wherein the control server determines the control parameters based upon an optimal level for the control parameters that remains within the economic setpoint, wherein said optimal level may

not correspond to an optimal performance, the optimal performance requiring a higher economic setpoint. Mecham discloses a controller connected to an evapotranspiration module (Mecham, Column 3, Lines 57-60). At most, Mecham discloses that the requested watering needs are compared to a watering budget, with the central control unit granting permission to actuate the control valves only if the requested irrigation amounts meet any imposed budget limitations (Mecham, Column 18, Lines 55-62). The present invention determines the control parameters based upon an optimal level within the economic setpoint. For instance, the system may water less each day, water during certain times of day, etc. depending upon a host of factors including the economic setpoint. At most, a system such as Mecham's will cut off when a certain amount of water has been used. Mecham does not disclose even an attempt to optimize any such water usage based upon an economic setpoint. The system of Mecham would water according to needs, so if the plants need water in the middle of the day, they would be watered, wasting water that evaporates quickly as the plants are being watered. If the water budget is exceeded, the watering stops. There is no optimization to this method of watering, only cutting it off at a point. The present invention plans the watering schedule and includes the economic setpoint in these plans. Thus, the plants are watered at an optimal time and amount for the economic setpoint. Mecham does not disclose this feature. Further, Mecham teaches away from the present invention, as the background of Mecham says that information from a weather service is of little value in determining evapotranspiration. Mecham states that collected climatic information along with any evapotranspiration equation value calculated from weather station climatic information is of little (if any) accurate use to a farmer or land owner located tens or hundreds of miles away from, or perhaps nearby but at a different elevation than, the site of the weather station, or perhaps nearby but affected by localized conditions such as man-made structures, forests and the

like which affect evapotranspiration (Mecham, Column 1, Lines 48-63). The present invention utilizes information from such weather services collected over a network. Mecham would not use this information, as it believes it to be inaccurate.

Hergert also fails to cure the deficiencies of the above references. Hergert provides for optimal irrigation at the most economical price point (Hergert, Column 3, Lines 46-50). This means that the price point is not set, but is simply at its lowest point for the optimized irrigation. Examiner points to language in Hergert stating that the Hergert invention calculates the available power from the power generating facility and then adjusts the period of operation based on the calculated considerations. However, the meaning of ‘available power’ takes a completely different meaning in Hergert. ‘Available power’ relates to the system only operating when the price of power is at a specific per unit price. This is not a maximum number of units available to the irrigation system, but rather relates to timing of any watering. Hergert states that electrical costs are divided into priority categories, with certain irrigation occurring depending upon the current cost of electricity per kilowatt hour, as this cost may change at certain times of the day. For instance, Category A may be \$0.08 per kilowatt hour, Category B may be \$0.06 per kilowatt hour, and Category C may be \$0.04 per kilowatt hour. Thus, if the cost of electricity is currently \$0.06 per kilowatt hour, both Category A and Category B irrigations will be watered while Category C would not. However, there is no limitation to the amount of power that these categories draw at this price per kilowatt hour. Thus, there is no economic setpoint, as defined and claimed by the present invention. The irrigation is always at the perfect amount for the per unit cost. There is no maximum budget that the electrical costs must stay within. In contrast, the present invention claims a set economic setpoint, and the irrigation is optimized based upon this budget. The present invention, for instance, may result in a less than ideal amount of watering,

while Hergert always waters the ideal amount when electricity is at a per unit cost, but not within any budget. Nowhere does Hergert disclose optimizing watering based upon budget, as Hergert only teaches an optimized watering. Further, even if the ‘available power’ in Hergert was a maximum amount of power available to the residential system, this maximum has not been set by the user to limit cost. The economic setpoint of the present invention is set by the user of the residential system. Nowhere does Hergert disclose that ‘available power’ is in any way set by the user. Therefore, Hergert cannot cure the deficiencies of Petite and Mecham. For at least these reason, the rejection should be withdrawn.

Claims 30-35 and 37-42 are dependent claims. Because neither Petite nor Mecham nor Hergert, alone or in combination, teaches all of the elements in the independent claims, the dependent claims, which depend therefrom, also are patentability distinct from any prior art of record. These dependent claims add further features that, in combination with the features presented in the independent claims, clearly further distinguish the claims from any teaching or suggestion by Petite, Mecham, or Hergert. For this reason, Applicant respectfully requests withdrawal of the rejection. Furthermore, there is no motivation to combine any of these references outside of Applicant’s own disclosure. Even if they were combinable, *arguendo*, the combination would not be able to obviate the present invention for at least the reasons set forth above. Thus, the rejection of the claims should be withdrawn. For this reason, Applicant respectfully requests withdrawal of the rejection.

No extension of time is believed to be necessary to enter this amendment. If any other fees are associated with the entering and consideration of this amendment, please charge such fees to our Deposit Account 50-2882.

Applicant respectfully requests an interview with the Examiner to present more evidence of the unique attributes of the present invention in person. As all of the outstanding rejections have been traversed and all of the claims are believed to be in condition for allowance, Applicant respectfully requests issuance of a Notice of Allowance. If the undersigned attorney can assist in any matters regarding examination of this application, Examiner is encouraged to call at the number listed below.

Respectfully submitted,

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